**STATE OF SOUTH DAKOTA CLASS SPECIFICATION**

**Class Title:  Senior Systems Programmer**                    **Class Code:  10734**

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**A. Purpose:**

Plans, installs, integrates, and maintains system software, hardware, and products to ensure data integrity and accessibility of the system, peripheral, and ancillary services; and efficient use of the environment.

**B. Distinguishing Feature:**

The Senior Systems Programmer has primary accountability for optimizing resource utilization; resolving complex operational problems; and providing the installation, maintenance, and operating efficiency of an assigned platform.
The Systems Software Specialist serves as an internal consultant, providing expert technical leadership and guidance to other technical staff.
The Systems Programmer is assigned specific system products to maintain, resolves problems, and monitors resource utilization; but still works under the guidance of higher-level operating systems staff.

**C. Functions:**
*(These are examples only; any one position may not include all of the listed examples nor do the listed examples include all functions which may be found in positions of this class.)*

1. Installs system software, hardware, and products to provide effective integration with existing operating systems.
   a. Evaluates available products.
   b. Determines software and hardware requirements and develops installation plan.
   c. Installs, customizes, and tests the product.
   d. Sets standards and procedures for productional use of the product.
   e. Creates documentation for the use of the product and all support procedures and programs.
   f. May serve in a leadership role on assigned projects.

2. Maintains and modifies operating system software, hardware, and products to ensure clients have continued access to the system and support developmental and production environments.
   a. Installs enhancements and upgrades.
   b. Modifies software in response to work requests from data processing staff.
   c. Tunes the operating system to improve efficiency.
   d. Documents changes and new features of products to provide information to staff and clients.

3. Analyzes and resolves operating system software, hardware, and product problems to ensure efficient functioning of the system.
   a. Analyzes system problem reports.
   b. Collects software maintenance data.
   c. Diagnoses and resolves operating system problems.
   d. Provides technical support to data processing users, operators, developers, and

staff.

4. Monitors overall backup, recovery, security, and disk space fragmentation to maintain operational status of the database.

5. Develops, maintains, and implements system security and audit procedures to control access to the database.

6. Performs other work as assigned.

**D. Reporting Relationships:**

Typically reports to a higher-level operating system staff or manager. Typically does not supervise, but may provide training and work direction to lower-level system staff.

**E. Challenges:**

Challenged to determine and correct system software, hardware, or product problems. This is difficult because it must be accomplished with a minimum of service interruption. The incumbent is further challenged to install and maintain a vast array of software/hardware products that are continually changing, integrate the function and goals of management with varied philosophies of development groups, and introduce new products into the existing operating systems.

Typical problems include system software and hardware problems, performance issues, help desk referrals, and product customization.

**F. Decision-making Authority:**

Decisions made include feasibility of enhancements and new products, product maintenance schedules, installation and implementation procedures for systems software or hardware upgrades, techniques required to improve the design of systems, causes for system failures, system product parameters, and recommendations of new or revised policies and procedures.

Decisions referred include approval of software/hardware changes; final implementation plans and dates; security and performance standards; and approval of policies, procedures, and product design.

**G. Contact with Others:**

Weekly contact with software and hardware vendors on problem resolution, system performance, product interfaces, applications, and clarification of installation and maintenance procedures; daily contact with data processing and development staff to provide consultation and technical advice, and operations staff to give information on performance, software, hardware, and procedural changes.

**H. Working Conditions:**

Typical office environment, subject to on-call or after-hours work to resolve operating system problems.

**I. Knowledge, Skills, and Abilities:**

Knowledge of:
- system software, hardware, and products or telecommunications software analysis, design, testing, debugging, and maintenance techniques and practices;
- administrative and technical operations of an information management system;
- applications development;
- cross-systems integration.

Ability to:
- design, develop, and control several operational aspects of a system in relation to administrative informational requests;
- install and maintain assigned system software, hardware, and products;
- identify and resolve system-related problems;
- provide technical leadership to less experienced systems staff or other information systems professionals.